



## Wood Adhesives

### PU 400 MARINE

#### Technical Data Sheet

Reviewed: 14.02.2017



#### DESCRIPTION

**PU 400 MARINE** is a moisture curing, single-component, reactive wood adhesive, based on polyurethane, highly resistant to water and temperature. Provides excellent resistance to humidity, solvents, temperature and withstands rough handling. While curing the adhesive foams up slightly, offering the advantage of fixing possible imperfections. Offers an extra strong bonding and it is suitable for outdoor constructions as well as marine applications. **Complies with specifications D4 according to DIN EN 204.**

#### ADVANTAGES

- One component
- Excellent bonding strength
- Excellent water resistance D4 (waterproof)
- Suitable for exterior use
- Temperature resistance
- Self-expanding – covers imperfections

#### APPLICATIONS

- Marine applications
- Bonding of windows and doors, e.g. laminating of windows and joint bonding of doors
- Laminate bonding of wood and wood materials
- Joint bonding for outdoor use
- Joint bonding of MDF boards
- Bonding of mineral building boards
- Bonding of ceramic materials, concrete materials and hard foams including polystyrene

#### INSTRUCTIONS FOR USE

1. The adherents must be clean, dry and free from dust and grease. Remove release agent from plastic surfaces.
2. Apply with spatula, hand roller, or directly from plastic squeeze bottle.
3. Single-sided application to the surface which is least porous.
4. Assemble components and apply light pressure. Keep joint supported till the adhesive is fully cured.
5. Wear protective gloves, latex or plastic, for better protection of your hands.

#### CLEANING

Clean application tools with acetone or nitro solvent immediately after use. Cured adhesive must be mechanically removed.

#### REMARKS

The ideal working temperature is +20°C, the ideal moisture content of the wood 8-12 %. Do not process below +8°C.

#### COVERAGE

100 - 150 gr/m<sup>2</sup> depending on surface porosity and condition

#### TECHNICAL CHARACTERISTICS

**Base:** Polyurethane

**Color:** Yellowish - Creamy

**Consistency:** Medium viscosity

**Specific gravity:** approx. 1.08 g/cm<sup>3</sup>

**Viscosity (Brookfield 20°C):** 2000 – 4000 cps

**Open time:** 45 - 60 minutes at approximately 20°C. High temperatures, high humidity or moisture supply reduces this period. The product cures to a water-resistant, solvent resistant and semi-rigid adhesive film when subjected to the influence of humidity (air, material). The cross-linking process can be accelerated by means of a targeted moisture supply, (fine water spray, approximately 20 g/m<sup>2</sup>), or by higher temperatures (50°C up to max. 70°C).

#### Pressing/clamping:

The cross-linking process should take place with a pressure that guarantees sufficient contact with the adherent. The necessary pressure is dependent upon the type and size of materials. A good fit should be achieved. Minimum pressure for the bonding laminated wood: 0,6 N/mm<sup>2</sup>.

#### Pressing times:

The pressing times are dependent upon temperature and moisture supply.

20°C approximately 120 minutes

40°C approximately 60 minutes

60°C approximately 30 minutes

Exact times must be established for the particular application according to the prevailing conditions.

#### Final setting time:

Subsequent processing of the bonded parts is possible after 6-8 hours. Final strength is achieved after approximately 24 hours.

# Evochem®

EVOCHEM S.A.  
Tzavardella place 13341, Fyli, Attica, Greece  
Tel.: 210 5590460, 210 5590155 Fax: 210 5590244  
E-mail: info@evochem.gr Website: [www.evochem.gr](http://www.evochem.gr)





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#### STORAGE

Products should be stored in a dry and cool place at a temperature of 5°C -35°C, away from sources of ignition. Protect from humidity and direct sunlight.

#### SHELF LIFE

12 months from the production date in the above mentioned storage conditions. The product should remain in the original unopened packaging bearing the manufacturer's batch number.

#### PACKAGING

Plastic bottles 175gr, 750gr

PACKAGING	CODE	BARCODE
Plastic bottle 175gr	01034	5204094010340
Plastic bottle 750gr	01033	5204094010333

#### HEALTH & SAFETY INFORMATION



**Acute Tox. 4: H332** - Harmful if inhaled **Carc. 2: H351** - Suspected of causing cancer **Eye Irrit. 2: H319** - Causes serious eye irritation **Resp. Sens. 1: H334** - May cause allergy or asthma symptoms or breathing difficulties if inhaled **Skin Irrit. 2: H315** - Causes skin irritation **Skin Sens. 1: H317** - May cause an allergic skin reaction **STOT RE 2: H373** - May cause damage to organs through prolonged or repeated exposure **STOT SE 3: H335** - May cause respiratory irritation **P101:** If medical advice is needed, have product container or label at hand **P102:** Keep out of reach of children **P103:** Read label before use **P280:** Wear protective gloves / protective clothing / eye protection / face protection **P302+P352:** IF ON SKIN: Wash with plenty of water **P304+P340:** IF INHALED: Remove person to fresh air and keep comfortable for breathing **P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing **P501:** Dispose of the contents/containers in accordance with the current legislation on waste treatment **EUH204:** Contains isocyanates. May produce an allergic reaction **EUH208:** Contains 4,4'-methylenediphenyl diisocyanate, Diphenylmethanediisocyanate-prepolymer, Methylenediphenyldiisocyanate. May produce an allergic reaction. Substances that contribute to the classification: Diphenylmethanediisocyanate-prepolymer; Methylenediphenyl diisocyanate; 4,4'-methylenediphenyl diisocyanate. Persons already sensitized to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

The directives contained in this technical data sheet are the result of our long experience from real life applications and the research testing of our research and development laboratory and have been submitted in good faith. Because of the diversity of the materials and substrates and the great number of possible applications, which are beyond our control, we cannot accept any responsibility for the results obtained. In every case it is recommended to carry out preliminary experiments. We are liable only for our products for being free from faults and of consistent quality. Users are responsible for complying with local legislation and for obtaining any required approvals or authorizations. The present edition of this technical datasheet automatically cancels any previous ones concerning the same product.



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